

CEDAR CREEK, N. J.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF OF ENGINEERS, REPORTS ON  
PRELIMINARY EXAMINATION AND SURVEY OF CEDAR CREEK,  
CUMBERLAND COUNTY, N. J., WITH A VIEW TO DEEPENING AND  
STRAIGHTENING THE CHANNEL.

MARCH 14, 1914.—Referred to the Committee on Rivers and Harbors and ordered to  
be printed, with illustrations.

WAR DEPARTMENT,  
Washington, March 13, 1914.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I have the honor to transmit herewith a letter from the Chief  
of Engineers, United States Army, of this date, together with copies  
of reports from Maj. R. R. Raymond, Corps of Engineers, dated  
November 6, 1912, and December 16, 1913, with maps, on prelimi-  
nary examination and survey, respectively, of Cedar Creek, Cumber-  
land County, N. J., made by him in compliance with the provisions  
of the river and harbor act approved July 25, 1912.

Very respectfully,

LINDLEY M. GARRISON,  
Secretary of War.

WAR DEPARTMENT,  
OFFICE OF THE CHIEF OF ENGINEERS,  
Washington, March 13, 1914.

From: The Chief of Engineers, United States Army.

To: The Secretary of War.

Subject: Preliminary examination and survey of Cedar Creek, Cum-  
berland County, N. J.

1. There are submitted herewith, for transmission to Congress, re-  
ports dated November 6, 1912, and December 16, 1913, with maps,



by Maj. R. R. Raymond, Corps of Engineers, on preliminary examination and survey, respectively, of Cedar Creek, Cumberland County, N. J., with a view to deepening and straightening the channel, authorized by the river and harbor act approved July 25, 1912.

2. Cedar Creek is a small tidal stream emptying into Delaware Bay 72 miles south of Philadelphia, and lying wholly within Cumberland County, in southern New Jersey. The head of navigation is at a fixed bridge about one-half mile below the dam at Cedarville, which is 7 miles above the mouth. Between this bridge and a point one-half mile below Bower Creek, a distance of about  $3\frac{1}{4}$  miles, there is less than a foot of water at low tide in many places, but from this point to the mouth there is a depth of 7 feet and over, with a controlling depth of about 4 feet on the bar. The improvement apparently desired is the deepening and straightening of the channel through the shoal stretch  $3\frac{1}{4}$  miles in length mentioned above. The district officer presents a plan of improvement providing for a channel 5 feet deep at mean low water and 50 feet wide, including a turning basin and one cut-off, from Cedarville bridge to a short distance below Bower Creek, at an estimated cost of \$18,140, and a channel 5 feet deep and 100 feet wide over the bar at the mouth, at an estimated cost of \$1,633. He expresses the opinion that the locality is worthy of improvement to this extent. In the opinion of the division engineer the proposed cut at the mouth is unnecessary, and the creek between the mouth of Bower Creek and the head of navigation at the fixed bridge is not worthy of improvement by the United States unless the local interests would be willing to cooperate to the extent of contributing one-half of the estimated cost.

3. These reports have been referred, as required by law, to the Board of Engineers for Rivers and Harbors, and attention is invited to its report herewith, dated January 27, 1914, concurring with the views of the division engineer.

4. After due consideration of the above-mentioned reports, I concur with the views of the division engineer and the Board of Engineers for Rivers and Harbors, and therefore report that the improvement by the United States of Cedar Creek, N. J., is deemed advisable from the mouth up to Cedarville by providing a channel 5 feet deep at mean low water and 50 feet wide, including one cut-off and a turning basin at the upper end, as indicated on the accompanying maps, at a total estimated cost of \$18,140, provided that local or other interests will contribute one-half of the first cost of the work, and furnish adequate dumping grounds, and that no expense shall be incurred by the United States for acquiring any lands required for the purpose of this improvement. The total amount to be furnished by the United States, \$9,070, should be provided in one appropriation.

DAN C. KINGMAN,  
*Chief of Engineers, United States Army.*



REPORT OF THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS  
ON SURVEY.

[Third indorsement.]

THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS,  
*January 27, 1914.*

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. Cedar Creek is a small tidal stream lying wholly within Cumberland County in southern New Jersey. Its length from source to mouth is about  $10\frac{1}{2}$  miles. A dam at Cedarville limits possible navigation to a length of 7 miles, but a fixed bridge half a mile below the dam reduces the practical length to  $6\frac{1}{2}$  miles. There is less than a foot of water at low tide in many places between the bridge and a point half a mile below Bower Creek, a distance of about  $3\frac{1}{4}$  miles. Below this point there is a channel depth of 7 feet and over to the mouth of the creek, while on the crest of the bar outside the creek the controlling depth is about 4 feet.

2. The portion of the creek where improvement is desired is the  $3\frac{1}{4}$  miles next below the bridge. The tide has an average range of about 5 feet at the mouth and about 3 feet at Cedarville Landing.

3. In former years, when there were no other means of transportation than by water, Cedar Creek and Cedar Landing were busy places. The water traffic has largely disappeared now, however, and but a few boats use the stream. With the advent of the small gasoline cargo carrier, interest in the creek as an avenue of commerce has revived, and the community is now generally interested in the restoration of navigation. The business of the town of Cedarville, now carried almost entirely by rail, indicates a miscellaneous commerce of limited extent, having a value of about \$600,000. What portion of this would go by water if the improvement were made is conjectural. It is claimed that the improvement would develop additional commerce by encouraging the cultivation of land that now lies idle.

4. A survey having been made, the district officer presents a plan of improvement providing for a channel 5 feet deep and 50 feet wide, including a turning basin and one cut-off, from Cedarville bridge to a short distance below Bower Creek, the estimated cost being \$18,140, and for a channel 100 feet wide and 5 feet deep over the bar at the mouth of the river, \$1,633. The estimate for maintenance is \$2,500 annually for some years, after which it may be reduced to \$1,500. The district officer believes the locality worthy of improvement to this extent. The division engineer does not see the necessity of the improvement at the mouth of the river, and is of opinion that the improvement proposed above is not worthy of being undertaken by the United States, unless the local interests are willing to cooperate to the extent of contributing one-half of the cost.

5. In addition to the information furnished in the reports of the district officer, the board has given consideration to a number of communications received from interested parties. There is at present practically no commerce on this stream, and the amount that may be expected to develop is uncertain. It appears that while the improvement would be of some benefit to the general public, it would be of greater value to the immediate community affected.



For this reason the board believes that if the work is undertaken by the United States, there should be liberal cooperation by the community. It is of opinion that a fair basis for such cooperation would be for local interests to contribute one-half the cost of the work required on that part of the creek between Cedarville and a point just below Bower Creek. The board concurs with the division engineer in believing that the work at the mouth is unnecessary and inadvisable at this time.

6. In view of the foregoing, the board reports, in concurrence with the views of the division engineer, that it is advisable for the United States to undertake the improvement of Cedar Creek, N. J., from a point in the vicinity of the mouth of Bower Creek up to Cedarville, by the provision of a channel 5 feet deep at mean low water and 50 feet wide, including one cut-off, and a turning basin at the upper end, as indicated on the accompanying map, at a total estimated cost of \$18,140 and such amount as may be necessary for maintenance, provided, however, that local or other interests will contribute one-half the first cost of the work and furnish free of cost, to the United States, adequate dumping grounds for the material to be dredged from the channel and the turning basin and a right of way 300 feet wide for the proposed cut-off between Long Reach and Lower Sand Bar Reach. The total amount to be furnished by the United States, \$9,070, should be made available in one appropriation.

7. In compliance with law, the board reports that, except as contemplated by the above recommendations, there are no questions of terminal facilities, waterpower, or other subjects so related to the project proposed that they may be coordinated therewith to lessen the cost and compensate the Government for expenditures made in the interests of navigation.

For the board.

FREDERIC V. ABBOT,  
Colonel, Corps of Engineers,  
Senior Member Present.

#### PRELIMINARY EXAMINATION OF CEDAR CREEK, N. J.

ENGINEER OFFICE, UNITED STATES ARMY,  
Wilmington, Del., November 6, 1912.

From: The District Engineer Officer.

To: The Chief of Engineers, United States Army  
(Through Division Engineer).

Subject: Preliminary examination of Cedar Creek, N. J.

1. In compliance with department letter of August 3, 1912, report upon preliminary examination is hereby submitted for Cedar Creek, N. J., for which examination provision is made in the river and harbor act of July 25, 1912, as follows:

Cedar Creek, Cumberland County, N. J., with a view to deepening and straightening the channel.

2. The examination was made by me, accompanied by Mr. George W. T. Miller, assistant engineer, whose report is given below, viz:

Cedar Creek is a small tidal stream lying wholly within Cumberland County, in southern New Jersey. It has a total length from source to mouth of about 10½ miles, flows in a southwesterly direction, through a very flat country, draining an area of about 18 square miles, and joins Delaware Bay about 2 miles east of Ben Davis Point



and about 43 and 72 miles distant from Wilmington, Del., and Philadelphia, Pa., respectively.

The country through which the creek flows is so flat that tidal influence must have been felt almost to its source before the dam at Cedarville was constructed. This dam was built many year ago and impounds quite a large lake, whose purpose is that of supplying ice to the neighborhood. There is not sufficient flow of water for development for commercial purposes. The dam forms a part of the main highway leading from Bridgeton, 8 miles to the north to Port Norris, 13 miles to the southeast of Cedarville. A trolley road occupies part of the bed of this highway. Between Bridgeton and Port Norris, the large oyster shipping point on Maurice River, are a number of small towns, which have now become so extended along the road that they form an almost continuous settlement between the terminals.

The tidal portion of Cedar Creek is now about 7 miles in length, but a fixed bridge half a mile below the dam reduces its navigable portion to about  $6\frac{1}{2}$  miles. Between the dam and the bridge the creek bed is very narrow and shallow. At the bridge, the width of the stream is about 50 feet, while at the mouth the width is about 300 feet. There is a gradual increase in width from the bridge to Bower Creek, where it is about 100 feet. The inflow from this large tributary causes a sudden increase in width to about 150 feet and from there on down to the mouth the increase is gradual. There is less than a foot depth of water at low tide, in many places between the bridge and about half a mile below Bower Creek; thence to the mouth there is a channel depth of 7 feet and over. The crest of the bar just outside of the mouth has a low-water controlling depth of 5 feet. With the exception of two long bends the course of the creek from the bridge to just below Bower Creek is comparatively straight; thence to the mouth it is very crooked. At three places, a half mile, 1 mile, and a mile and a half below the bridge, the high land of a light sandy nature touches the creek on the left bank; throughout the remainder of its course to the bay the creek flows through marsh and low-lying meadow lands.

At the point 1 mile below the bridge, where the fast land reaches the creek, there is a low bluff of red sand which is being rapidly cut away by the current and spread across the creek bed just below, forming the worst shoal in the creek. One of the improvements desired is the elimination of this bend by a cut-off.

The portion of creek it is desired to have improved is from about half a mile below the mouth of Bower Creek to the bridge. This portion of the creek has become so bad that boats can not be induced to trade in it. The length of creek involved is about  $3\frac{1}{4}$  miles. The bed of the creek is, in the upper section, mud and sand about equally proportioned. The tide has an average range of about 5 feet at the mouth and about 3 feet at Cedarville Landing. Owing to its flat watershed of sandy soil there are no freshets in the creek. There are no wharves along the creek until Cedarville Landing is reached; there there are three wharves, one on the right bank, which has been allowed to fall into a bad state of ruin and decay for lack of use, and two on the left bank, one in bad condition and the second in very good order, with a well-paved road leading to it from the center of the town, half a mile distant. Although this last-named wharf is on private property, it is known as the public wharf and everyone has free access to it with a trifling wharriage to boats, \$1 a year for the boats which harbor in the creek regularly, for use of wharf at any time it is not occupied. This charge would undoubtedly be increased to a reasonable figure for revenue to the wharf owner, if regular lines of trade are established as a result of improvement to the creek.

In addition to the trolley road passing directly through the main street of the town, which carries passengers only, there is a branch of the Central Railroad of New Jersey, whose line is 1 mile from the landing on Cedar Creek. There are well-paved roads connecting these two points, but no other terminal facilities, as there is practically no traffic on the creek now, and what is called into being will be of practically the same character as that carried by the railroad.

In former times, when the country was dependent upon the waterways for business communications, Cedar Creek and Cedar Creek Landing were busy places. There was a shipyard located there with two blacksmith shops which were kept busy all the time by the many oyster boats—60 or more—which were fitted out and repaired there. Now these activities have disappeared, and but a few boats, perhaps a dozen, tie up at the landing during the close of the oyster season. Efforts have been made of late years to establish a regular trading packet line between Cedar Creek and Philadelphia, and attempts have repeatedly been made to ship by water the large crops of tomatoes and other farm products to the city markets, but they have all failed on account of the shoal condition of the upper creek. It has now reached the point that no boat of any size can be induced to run the creek either with or for a cargo.

With the advent of the small gasoline-propelled cargo carrier, independent in its movements of wind and tide, a revival of interest in the creek as an avenue of commerce



has taken place, and the whole community is interested in the effort to have it restored to its original good condition. As an indication of the popular interest in the creek, a petition asking for its improvement was prepared and sent to the Congressman of the district, signed by 149 persons. This, out of a township population of 1,700, would indicate that at least half of the men of the community signed the petition.

As usual, where there is no water competition, there is at Cedarville a complaint of excessive freight rates. An illustration of this given is grain, which is 3 cents per 100 pounds higher than at Fairton, on the Cohansey River, but 4 miles away.

About five years ago a hay-baling concern, which had been operating on the Cedar Creek Landing wharf for a number of years, had to give up as it was impossible longer to get the salt hay from the bay-shore marshes up the creek.

About 12,000 bushels of grain still comes up the creek in small boats from Delaware, but the mills of the vicinity could handle twice that amount if they could get it.

Last year, Baltimore packers made arrangements to buy tomatoes at Cedarville, but they had to abandon the business as vessels capable of making the voyage and carrying a paying quantity could not get up the creek.

About 2,000 tons of manure is used annually by the farmers about Cedarville. This now all comes by rail from New York City. With the creek navigable, most, if not all, of it would come from Philadelphia by water and a much less distance.

As an instance of the depressing effect the condition of the creek has upon property, it was stated that the "public" wharf was sold 25 years ago for \$1,200. Last year it was again sold, bringing only \$150.

Statistics of the business of the town, now carried almost entirely by rail, furnished by Mr. F. C. Mayhew, of Cedarville, are as follows:

Valuation of township real estate.....	\$826, 000
1,500 tons of coal, at \$6.....	9, 000
78,000 baskets, at 6 cents.....	4, 680
80,000 cases of tomatoes, at \$2.....	160, 000
20,000 cases of beans, peas, berries, sweet potatoes, etc., at \$2.....	40, 000
8 stores doing a combined business of.....	100, 000
1 flour mill doing a business of .....	20, 000
2,000 tons of manure, at \$2.....	4, 000
1 large wholesale and retail feed store business.....	50, 000
2 blacksmith shops doing a combined business of.....	25, 000
Amount estimated that the farmers deliver at the railroad depot of potatoes, strawberries, sweet potatoes, and other farm produce.....	250, 000
Total.....	662, 680

Much land now left of necessity idle, for lack of transportation facilities, could be cultivated if the creek were navigable. It is highly probable that the increased production invited by better transportation will prevent the railroad from suffering any loss in amount of business by reason of water competition, but on the other hand, water competition will regulate any excessive freight rates.

The project appeals to one who has gone over the ground personally, both physical conditions and business, as a worthy and feasible one of economical execution and small cost for maintenance.

Those who petitioned for the improvement ask for a 3-foot low-water depth only. This is scaling down to the minimum that would be of any use in order not to appear as asking too much. A 3-foot depth is too small to make by any dredge capable of digging and throwing over the material to a proper distance on the adjacent banks, the most economical method of doing such a piece of work. These dredges draw about 4 feet of water and require at least a foot more in which to roll when working. A 5-foot channel depth is therefore the minimum for economy in making and for practical use.

In making a survey of the creek, it would be advisable to extend it to the bay shore, in order that all shoal spots may be covered, and with an organized survey corps on the ground, the additional cost of extending it would be small.

3. I approve the report. I consider this stream worthy of improvement by the General Government, provided the cost is not excessive. This can be determined only by a survey, which is recommended.

4. A map <sup>1</sup> of the locality is inclosed herewith.

R. R. RAYMOND,  
Major, Corps of Engineers.

<sup>1</sup> Not printed.



[First indorsement.]

UNITED STATES ENGINEER OFFICE,  
*New York City, November 30, 1912.*

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. Forwarded.

2. It would seem from this report that high-water navigation is now carried on, as shown by the statement that "about 12,000 bushels of grain still comes up the creek in small boats."

3. Under these circumstances, and in view of the small amount of commerce that would be benefited, and the short distance involved in the proposed improvement, viz,  $3\frac{1}{4}$  miles, which it would seem could be run at a high water, I am of the opinion that Cedar Creek is not worthy of improvement by the General Government.

WM. T. ROSSELL,  
*Colonel, Corps of Engineers,  
 Division Engineer, Eastern Division.*

[Third indorsement.]

BOARD OF ENGINEERS FOR RIVERS AND HARBORS,  
*January 20, 1913.*

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

For reasons stated herein, the board concurs with the district officer in recommending a survey in order to determine the extent and advisability of the improvement. It is suggested that the commercial statistics be given in short tons, if practicable.

For the board:

WM. T. ROSSELL,  
*Colonel, Corps of Engineers,  
 Senior Member of the Board.*

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SURVEY OF CEDAR CREEK, N. J.

UNITED STATES ENGINEER OFFICE,  
*Wilmington, Del., December 16, 1913.*

From: The District Engineer Officer.

To: The Chief of Engineers, United States Army  
 (Through Division Engineer).

Subject: Report of survey of Cedar Creek, N. J.

1. The following report of survey of Cedar Creek, N. J., authorized February 3, 1913, is submitted.

2. The following extract is quoted from report of Mr. George W. T. Miller, assistant engineer, under whose supervision the survey was made:

The field work of the survey, directly in charge of Mr. William E. Snyder, junior engineer (surveyor), was done in April and May last and covered the entire length of creek from the fixed bridge above Cedarville Landing, the head of navigation and almost the head of tide, to the mouth, a distance of 6 miles, and a portion of the Delaware Bay shore above and below the mouth of the creek and offshore to about the 7-foot mean low-water depth.

A tidal station was established about halfway between Cedarville Landing and the mouth, and gauge readings were taken during the field work of the survey.



A mean range of 5.3 feet of tide was found with extreme range of 6.4 feet, from 0.7 to 5.7 feet.

The high and low water widths of the creek are, respectively, at Cedarville, 60 feet and 30 feet; at Bower Creek, 110 feet and 60 feet; and at the mouth, 260 feet and 200 feet. The bordering meadowlands are unusually high, having an elevation of 1½ feet above high water.

The minimum or controlling depth of channel between Cedarville Landing and Bower Creek is 0.7 foot; the maximum depth in the same section of the creek is 11.3 feet. Between Bower Creek and the mouth, the minimum depth is 4.4 feet and the maximum depth is over 16 feet, the length of the sounding pole used. The controlling depth across the flats outside of the mouth is 4 feet.

The section of creek requiring improvement is from the fixed bridge above Cedarville Landing to about a half mile below Bower Creek; from this latter point to the mouth there is a channel of ample width and depth.

The least depth that can be economically made by dredges in this district is 5 feet. The flats outside of the mouth have a minimum depth of 4 feet, but there is nearly if not quite 1 foot more range of tide at the mouth than in the upper section. The configuration of the shore line of bay above the mouth of the creek requires a right-angle turn from the termination of the channel out of the creek for the line of dredging to the 5-foot curve of Delaware Bay, and it is doubtful that the inflow and outflow of tide can be made to follow such a slight depression in the bay foreshore as this channel would be. During the preliminary examination no request was made for improvement at the mouth, but estimate was given therefor in order to present a complete project.

The channel across the foreshore of the bay would be 2,200 feet long, and for a channel 100 feet in width and 5 feet in depth with allowances for overdepth and side slopes, would require the removal of 12,370 cubic yards, place measure.

In the upper creek, where the improvement is greatly desired and greatly needed, a channel 50 feet in width and 5 feet in depth, with allowances for 1 foot overdepth and side slopes of 1 on 1, and including turning basin and one cut-off, is proposed.

The length of creek needing improvement is 15,840 feet; the one cut-off proposed will shorten this distance 1,600 feet. The saving in distance of this 1,600 feet, nearly one-third mile, will be considerable, but the main purpose of the cut-off is to avoid a sandy bluff which is being rapidly eaten away and being deposited in the adjacent channel, producing the minimum depth of 0.7 foot previously mentioned. This erosion can be stopped by expensive revetment only, if the creek is allowed to follow its present course; hence the proposed cut-off. Assurance was given during the preliminary examination that title to the land needed for the cut-off would be given free of cost to the United States.

The bed of the creek is mud in the upper reaches, sand and gravel in the middle reaches, and mud, sand, and shells in the lower reaches and across the bay foreshore.

The banks of the creek appear to be firm enough to allow the dredged material to be cast upon them and that would be the most efficient and economical disposition of it. If the work at the mouth is undertaken, the material can be cast over to the northern side of the cut under the lee of the shore.

Table of distances and quantities.

	Distances.		Excavation.	
	By bends.	By cut-off.	By bends.	By cut-off.
	<i>Feet.</i>	<i>Feet.</i>	<i>Cubic yards.</i>	<i>Cubic yards.</i>
Highway bridge to cut-off.....	5,630	5,630	61,575	61,575
To lower end of cut-off.....	2,830	1,230	26,185	34,480
From lower end of cut-off to end of excavation below Bower Creek.....	7,380	7,380	41,370	41,370
From end of excavation below Bower Creek to beginning of excavation at mouth.....	15,420	15,420	.....	.....
To 5-foot curve, Delaware Bay.....	2,200	2,200	12,370	12,370
Total.....	33,460	31,860	141,500	149,795

The improvement to include the cut-off is the best, and is recommended, but the distances and excavation by the present course of the creek are given for comparison.



*Estimates.*

Dredging a channel 50 feet in width and 5 feet in depth, with allowance of 1 foot overdepth and side slopes of 1 on 1, including turning basin and cut-off from Cedarville bridge to below Bower Creek, 137,425 cubic yards, at 12 cents.....	\$16, 491. 00
Add for engineering and contingencies.....	1, 649. 00

Total.....	18, 140. 00
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Dredging a channel 100 feet in width and 5 feet deep, with allowance of 1 foot overdepth and side slopes of 1 on 1, 12,370 cubic yards, at 12 cents.....	1, 484. 40
Add for engineering and contingencies.....	148. 60

Total.....	1, 633. 00
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It is estimated that the annual maintenance will cost \$2,500 for several years, until the new regimen is established, when \$1,500 per annum will probably be sufficient to keep the channel in good condition.

As the section of river requiring improvement is in a bad condition throughout, the entire work of improvement should be accomplished in one operation.

3. No statistics additional to those given in the report of preliminary examination have been secured, as the present condition of the creek prevents commerce, and any contemplated improvement must be considered principally with respect to the prospective development of traffic.

4. Cedar Creek has characteristics similar to those of most of the numerous creeks in this district, which traverse several miles of marshes between navigable water and fast land. Without improvement of the creek little or no commerce is possible, and there is no probability that the future can show a development which can justify an appropriation for improvement. On the other hand, early improvement of such a creek enables traffic to develop. At once the crop of marsh hay becomes available. The dredging assists in the forming of banks to exclude tidewater from the meadows, and agriculture becomes possible on the marshes. Cedar Creek is peculiarly adapted to such improvement, because its marshes are unusually high and require only low banks for their protection.

5. Fertilizer, building materials, farm implements, supplies, and other bulky freight are admitted to the farm lands more conveniently and cheaply than by rail, and the bulky produce is sent to market advantageously. Good farm land not on the marshes is already available and awaits cheap transportation.

6. Several seasons must necessarily elapse before the successive steps toward development can be accomplished. It is certain that neglect of the waterway prevents development, and it is equally certain that improvement of the waterway invites agriculture, canning factories, and other industries producing valuable interstate commerce. Gradual at first, the growth of industries will doubtless be rapid after the first few seasons.

7. So clearly do the conditions indicate a good prospective commerce and so fully are such indications confirmed by the results already obtained in similar creeks heretofore improved, and so easy and cheap is the improvement when its possible and probable results are considered, that I consider the creek to be worthy of improvement by the Government to the extent stated above.



8. Existing terminals are described by Mr. Miller. Most of the loading of vessels is accomplished directly from the creek banks.

9. No question of freshets or water power is involved.

R. R. RAYMOND,  
*Major, Corps of Engineers.*

[First indorsement.]

OFFICE OF DIVISION ENGINEER,  
EASTERN DIVISION,  
*New York City, December 18, 1913.*

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. In the report of preliminary examination it appears that the depth desired by those who petitioned for the improvement is 3 feet. The district engineer officer states that this is a minimum depth and that it would be impracticable to make this minimum depth by the dredges operating in his district, as these dredges require a depth of 5 feet. The charts show a depth of not less than 4 feet across the flats at the mouth of the river. The district officer submits an estimate of \$1.633 for making a channel of 5 feet in depth across these flats, but the direction of the channel is such that its maintenance by natural forces is impracticable. Since the mean range of tide at the mouth is stated to be 5.3 feet, it is not evident why a channel across the flats would be necessary even for entrance of the dredge. In the creek itself there exists a natural channel of a depth of over 5 feet to a short distance above the mouth of Lower Howell Creek, and from Howell Creek to Bower Creek, a distance of one-half mile, the natural channel has a minimum depth of 4 feet. Above the mouth of Bower Creek the depths are insufficient for navigation.

2. The estimated cost of improvement for a channel 50 feet in width and 5 feet in depth from the mouth of Bower Creek to fixed bridge is \$18,140, with an annual cost for maintenance of \$2,500 for some years. The district engineer officer bases his recommendation for the expenditure of this sum not so much on existing commerce as on the development of commerce which would be produced by the improvement. While such development would be in the interests of general commerce, it is evident from the report that the local interests would be benefited directly to an even greater extent.

3. In my opinion the cut from mouth of Cedar Creek across the flats to the deep water of the Delaware is unnecessary and the creek between the mouth of Bower Creek and the head of navigation at fixed bridge is not worthy of improvement by the United States unless the local interests would be willing to cooperate to the extent of contributing one-half of the estimated cost.

W. M. BLACK,  
*Colonel, Corps of Engineers.*

[For report of the Board of Engineers for Rivers and Harbors on survey, see p. 3.]

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LETTER OF THE CAPTAIN OF THE SCHOONER "STANTON."

CEDARVILLE, N. J., *January 4, 1913.*

BOARD OF ENGINEERS FOR RIVERS AND HARBORS,  
*Southern Building, Washington, D. C.*

GENTLEMEN: Referring to public notice dated December 16, 1912, issued by your board regarding proposed improvements to Cedar Creek, I have been in the oyster



business for the past 40 years and have noted the steady filling in and narrowing of this creek, especially in the upper reaches, proving a great detriment to the oyster industry of this town and locality, and driving to other ports with better facilities a number of the larger boats. With my 52-foot schooner it is exceedingly difficult to navigate even on a full tide, the upper mile to mile and half of the creek being both very narrow and very shallow.

I thoroughly believe that the resulting benefits would fully justify the cost of the proposed improvement. The creek should be deepened to at least 4 feet at low water, and widened to accommodate vessels of 50 to 60 feet length. Outside of the benefits to the oyster industry, this improvement would allow the movement of freight by water to and from Cedarville amounting to a very considerable tonnage. Forty to fifty years ago, when there was a greater depth and width, a large amount of traffic of this kind was carried on, but this has not been possible of late years, it being a difficult matter to navigate a vessel light, and practically impossible when loaded except on a very full tide. Coal, grain, canned goods, and farm produce could be moved profitably and in good tonnage, but not without the suggested improvement.

In this connection, at one point a short canal dug through the marsh would cut out from the creek one of its most troublesome reaches, called the "Sand bar," at which point a field on one side is being rapidly washed away and this soil going to fill the creek above and below this point.

I speak from long personal knowledge of conditions of the Cedar Creek, and unless the deepening and widening is undertaken there can be but one result, i. e., the larger boats now remaining, even if running light, will be barred from the creek and only the lightest draft vessels able to come up to the docks and wharves. No doubt your representative has full memorandum of figures, etc., relative to this matter, and it is therefore needless for me to go further into these details. I strongly urge the provision of a better and obviously much-needed channel, and believe the benefits, present and prospective, would more than justify the cost of the improvement.

Yours, very truly,

WM. A. DIAMENT,  
*Captain of the Schooner "Stanton."*

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[LETTER OF MR. F. M. COBB.]

CEDARVILLE, N. J., *January 10, 1913.*

The BOARD OF ENGINEERS FOR RIVERS AND HARBORS,  
*Washington, D. C.*

DEAR SIR: Replying to yours of December 16, 1912, regarding the deepening and straightening of Cedar Creek.

I have no doubt the statistics are at your disposal and may appear meager. That, perhaps, was because time was not adequate to secure details, or that which is everybody's business does not obtain necessary attention.

From my experience of trading this creek for 20 years, I am convinced beyond a shadow of a doubt that commerce to and from this port would be greatly increased if adequate water facilities were provided.

Cedar Creek divides as rich an agricultural district as can be found in New Jersey, which, if navigable water facilities were provided, with the rapid transportation that could be procured by the modern power equipments, would afford an outlet other than by rail at a more reasonable cost to the producer and, because of its close proximity, of greater convenience.

Not many years ago it was a common occurrence to have two and sometimes three vessels trading out this creek, carrying produce to Philadelphia and elsewhere, and to have vessels delivering fertilizer, manure, lime, ashes, etc., at this port; also vessel loads of grain, of which I have carried quite a quantity myself, for 3 cents per bushel, which costs 4 cents per bushel by rail.

During the summer of 1911 the Heintz packing firm, located at Salem, N. J., endeavored to establish a line to carry tomatoes from this port to their factory, but were compelled to abandon the project. Why? Simply because of inadequate water facilities.

Is it to be wondered at that we are petitioning the Government to help us in this our extremity? For it is not what we want only, but what we need. Were we asking for forty or fifty thousand dollars for this improvement it might demand weighty consideration, but I am of the opinion the total cost would not exceed \$8,000. I believe I could give a satisfactory completion of the improvements for which we ask for that amount.



Praying that the Board of Engineers for Rivers and Harbors may give this improvement asked for their favorable consideration and hearty cooperation is the sincere wish of your humble and cooperative servant,

FRANK M. COBB.

[LETTER OF MR. MILES GANDY.]

CEDARVILLE, N. J., *January 13, 1912.*

The BOARD OF ENGINEERS FOR RIVERS AND HARBORS,  
*Southern Building, Washington, D. C.*

DEAR SIR: As a party interested in the proposed improvement of Cedar Creek, I respectfully submit the following reasons and arguments in a brief form bearing upon the necessity for improvement in the interests of commerce and navigation.

(a) The present amount of commerce is admittedly small. But prospectively, if the improvement were made, it would be larger.

(b) The prospective amount of commerce would resultingly be of benefit to general commerce and navigation sufficient to justify the probable cost of deepening and widening, because:

(1) About 75 farms within a radius of 5 miles square (25 square miles) produce thousands of tons of produce which is freighted by land at a greater rate of course than if it were shipped by water.

(2) All fertilizers and manures are shipped via railroad to these farms, whereas each farm on an average would use about 20 tons of fertilizer alone yearly.

(3) During tomato season alone the farmers are badly handicapped by the absence of tomato boats in our creek to buy their tomatoes. All other near-by towns, Maurice-town, Port Norris, Dividing Creek, Newport, and Fairton have tomato boats in their respective creeks. Our farmers can not compete with these towns and are forced to sell to local market, regardless of price. During the height of the season about 200 tons of tomatoes are packed daily.

(4) Three canning factories ship thousands of tons of canned goods to neighboring cities via railroad. These factories receive all their tin goods and coal from Philadelphia and other ports by rail at increased rates.

(5) At present about 40 vessels used in the oyster industry harbor at Cedarville. Much expense is contracted by their being delayed because of a slack water. At high tide a vessel drawing but 5 feet of water can not be certain of getting up Cedar Creek. There is one bad sand bar, constantly changing, washing away good farm land. Many vessels are unavoidably grounded, causing delay and loss of time and money. Vessels have been an entire week making the 6-mile trip to the bay, occasioning an expenditure of from fifty to eighty dollars, according to the size of the vessel.

Trusting to receive your attention to this matter, I am,

Yours, very truly,

MILES GANDY.

[LETTER OF MR. RAYMOND COX.]

CEDARVILLE, N. J., *January 14, 1913.*

The BOARD OF ENGINEERS FOR RIVERS AND HARBORS:

In regards to deepening the channel of Cedar Creek, of course I am only a small oysterman, so of course I have to freight corn or anything I can for a living between oyster seasons.

Now, last season, or winter, I bought and sold at Cedar Creek or Cedarville \$2,500 worth of corn, making a profit for me net, say, \$400, clear, and am doing the same this winter. My boat is small, of course.

I have to work all winter to do that. Now, for my benefit alone, if our creek was deepened I could use a larger boat to a good advantage.

Last season I came up to Newport by Wilmington after a load of fertilizer and had to wait two days for tide up Cedar Creek.

If the wind blows northwest a day or two, we don't have very much water at high tide, say 4 feet, which is hardly enough for the size of boats we use here, especially when loaded. For my benefit alone I can safely say I would be benefited to the extent of \$500 per year.

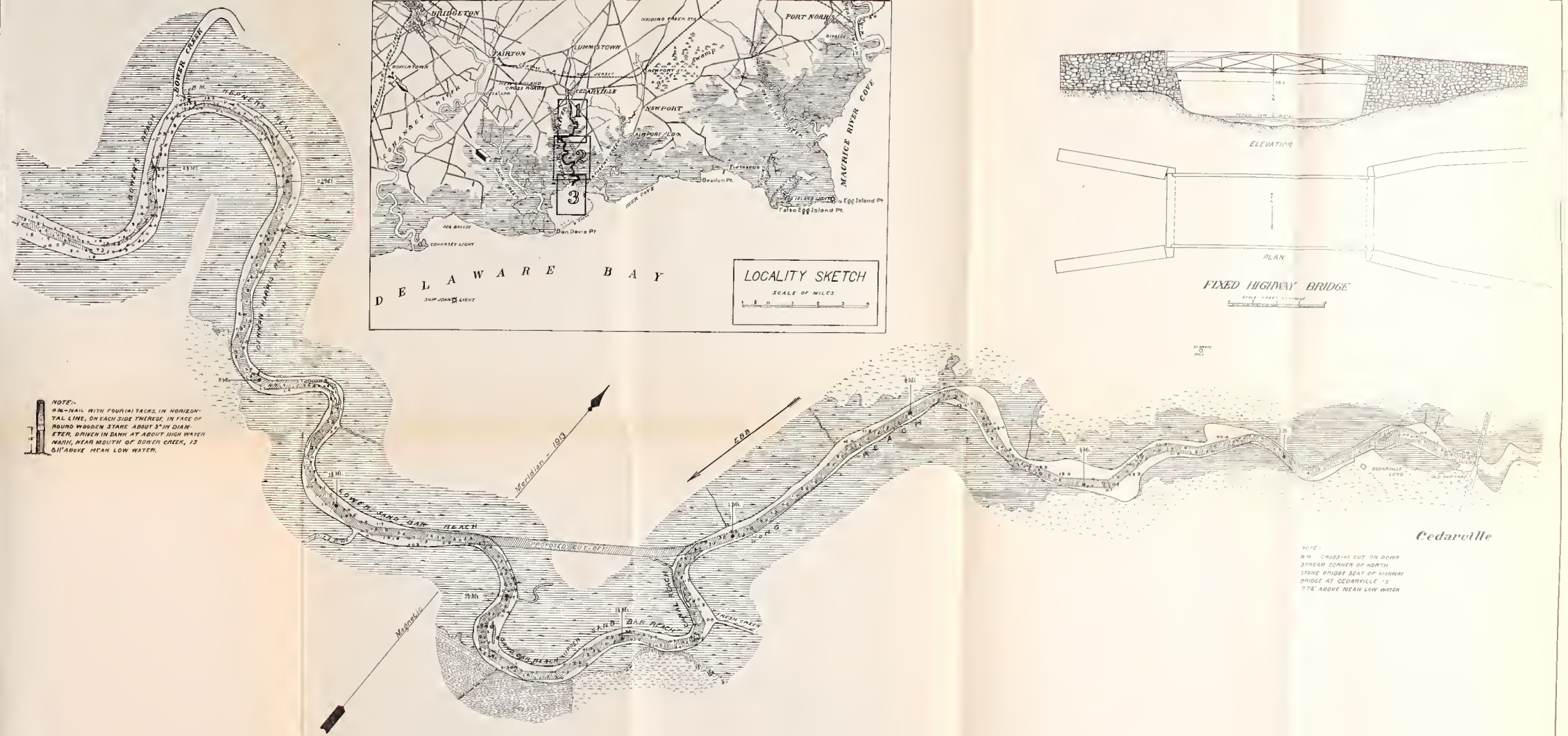
I think I could have freighting the year around if we had the water.

Hoping to have our creek deepened,

I remain, most respectfully,

RAYMOND COX,  
*Cedarville, Cumberland Co., N. J.*





NOTE-  
Survey made by Wm.E. Snyder, Junior Engineer, under the supervision of George W. T. Miller, Assistant Engineer.  
The soundings are reduced to mean low water and are expressed in feet and tenths.  
The 5' curve is shown thus: ———— V ————  
The 6' curve is shown thus: ———— VI ————  
The 7' curve is shown thus: ———— VII ————  
The 8' curve is shown thus: ———— VIII ————  
The proposed improvement is shown thus: ————  
Distances are given from fixed highway bridge at Cedarville and are shown thus: ———— Miles

To accompany report dated December 16, 1913,  
made under the provisions of the River  
and Harbor act of July 25, 1912.  
*T. D. Raymond*  
Major, Corps of Engineers, U.S. Army.

CEDAR CREEK,  
NEW JERSEY,  
1913.  
Scale of Feet  
In three Sheets  
Sheet No. 1.



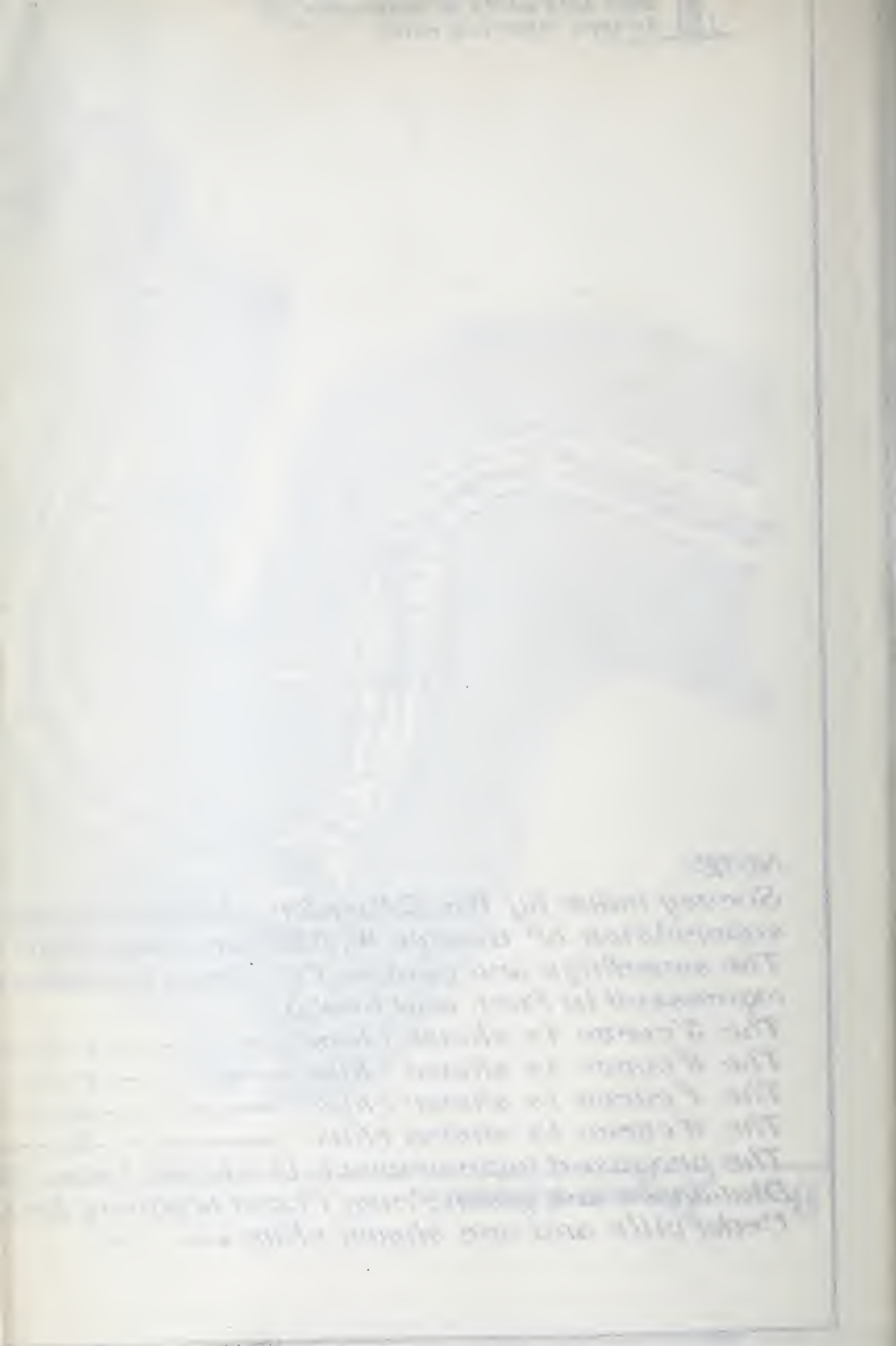
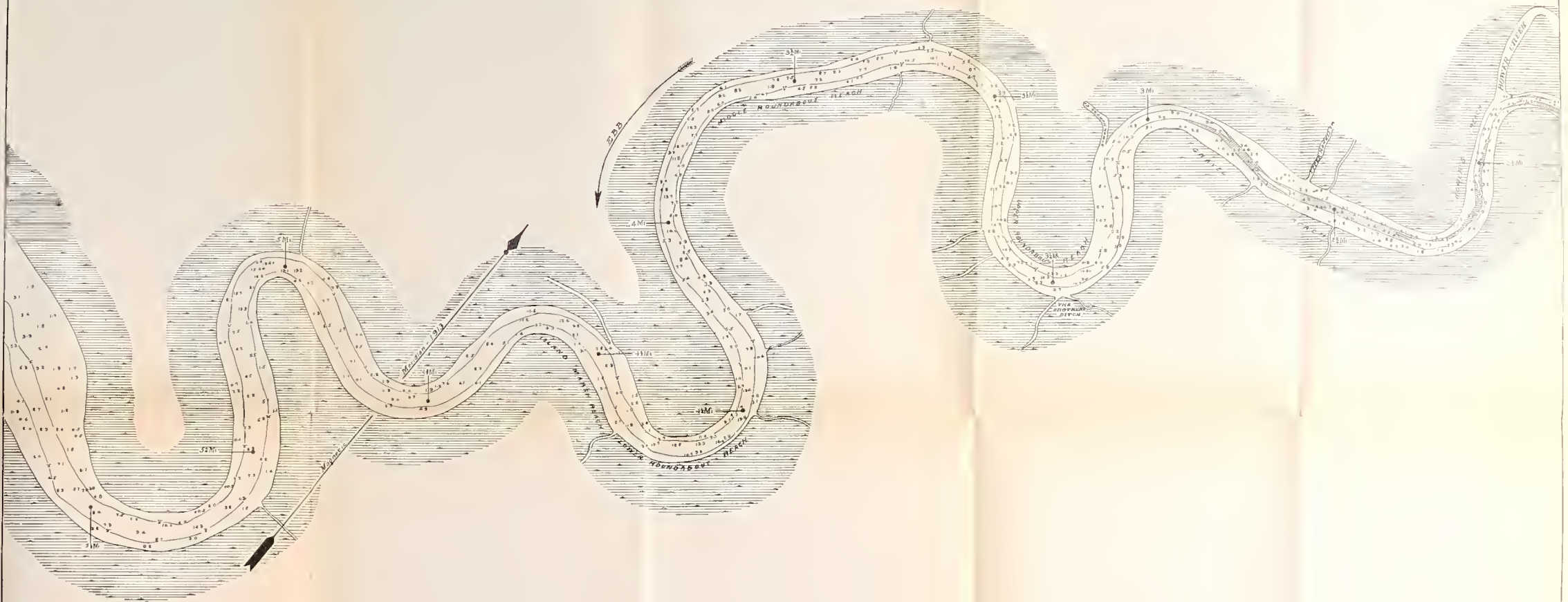


Figure 1


The figure shows a plan view of the bridge structure. The bridge is a simple beam bridge with a single span. The supports are shown as vertical lines. The deck is shown as a horizontal line. The bridge is oriented horizontally. The figure is a technical drawing of a bridge structure.





*CEDAR CREEK,  
NEW JERSEY.  
1913.*

Scale of feet

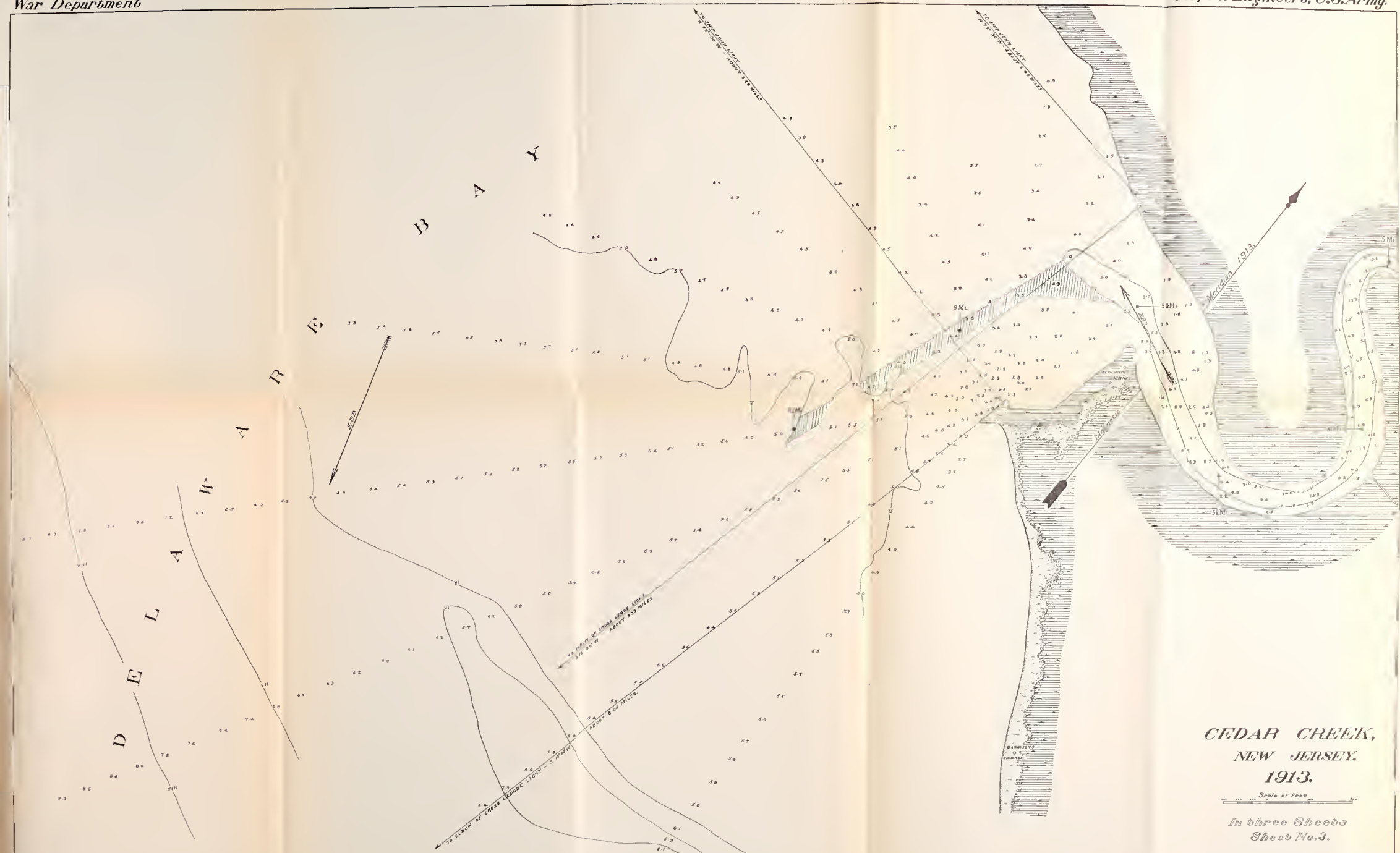


In three Sheets  
Sheet No. 2.











Mar. 1901

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